## PATENT ABSTRACTS OF JAPAN

(11)Publicati n number:

06-152237

(43)Date of publication of application: 31.05.1994

(51)Int.Cl.

H010 23/00 H010 13/08

(21)Application number: 04-314157

(71)Applicant : NIPPON AVIONICS CO LTD

(22)Date of filing:

29.10.1992

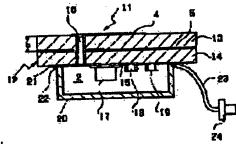
(72)Inventor: OE AKIHIKO

## (54) PATCH ANTENNA SYSTEM

## (57)Abstract:

PURPOSE: To facilitate the assembling of the patch antenna system by forming an antenna pattern via a dielectric board on the upper side of a ground conductor and forming a circuit pattern with circuit components mounted thereon via a dielectric board at the lower side of the ground

conductor. CONSTITUTION: A multi-layer ceramic board 12 of a patch antenna syst m 11 of one-point feeding type is made up of 1st and 2nd dielectric boards 13, 14. An antenna pattern 4 is formed on the upper side of the board 13 by a conductor member such as a copper foil by photo etching. Furthermore, the patch antenna is formed by forming a ground conductor 5 on a lower side and the shape is rectangular or circular. A radio wave from an earth satellite is received by the antenna pattern 4 and inputted to an input terminal of a low noise amplifier 2 directly via a throughhole 16. in which the radio wave is amplified. Then the amplified signal is inputted to a reception section through a coaxial cable 23. An external undesired radio wave is blocked by a cover 20. Moreover, the length of the throughhole 16 does not almost attenuate the reception radio wave becaus the thickness of the board 14 is minimized.



## **LEGAL STATUS**

[Date of request for examination]

22.10.1998

[Date of sending the examiner's decision of rejection]

06.03.2001

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Dat of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]